

CLAIMS

We claim:

1. A nucleic acid comprising the nucleotide sequence of the genome of a non-subtype B HIV-1 virus, wherein said nucleotide sequence is selected from sequences shown in Fig. 13.
2. A nucleic acid comprising a sequence of at least 12 contiguous bases derived from the nucleic acid of claim 1.
3. A nucleic acid comprising the nucleotide sequence of a LTR derived from the nucleic acid of claim 1.
4. A nucleic acid encoding a polypeptide selected from the group consisting of Gag, Pol, Vif, Vpr, Env, Tat, Rev, Nef and Vpu, wherein the polypeptide is encoded by the genome of a virus selected from the group consisting of 92RW009.6, 92NG003.1, 92NG083.2, 93BR020.1, 93BR029.4, 90CF056.1, 94CY032.3, 94CY017.41, 96ZM651.8, 96ZM751.3, and 94IN476.104.
5. A nucleic acid according to claim 4 having a nucleotide sequence derived from any one of the nucleotide sequences shown in Fig. 13.
6. A nucleic acid comprising a sequence complementary to the sequence of a nucleic acid of any one of claims 1-5.
7. A vector comprising a nucleic acid of any one of claims 1-5.
8. A cell comprising the nucleic acid of any of claims 1-5.
9. A cell comprising the vector of claim 7.
10. A composition comprising a nucleic acid of any one of claims 1 to 5, and a physiologically acceptable carrier.
11. A vector comprising a nucleic acid of claim 6.
12. A cell comprising the nucleic acid of claim 6.

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13. A cell comprising the vector of claim 11.
14. A composition comprising a nucleic acid of claim 6, and a physiologically acceptable carrier.
15. A polypeptide encoded by the nucleic acid of claim 1.
16. The polypeptide of claim 15 comprising a contiguous sequence of at least 13 amino acids.
17. A composition comprising a polypeptide of any one of claims 15 to 16, and a physiologically acceptable carrier.
18. A method for producing a polypeptide of claim 15, said method comprising growing the cell of claim 8 under conditions such that the encoded polypeptide is produced.
19. A method for producing a polypeptide of claim 15, said method comprising growing the cell of claim 9 under conditions such that the encoded polypeptide is produced.
20. A method for producing a polypeptide of claim 15, said method comprising growing the cell of claim 12 under conditions such that the encoded polypeptide is produced.
21. A method for producing a polypeptide of claim 15, said method comprising growing the cell of claim 13 under conditions such that the encoded polypeptide is produced.
22. A method of inducing serum antibodies that bind at least one polypeptide of claim 15, said method comprising, administering to a mammal, in a physiologically acceptable carrier, an amount of polypeptide of any one of claims 15 or 16 sufficient to elicit production of said antibodies.
23. An antibody to a non-subtype B HIV-1 virus made by the method of claim 22.

32. A method for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising contacting said sample with a nucleic acid of claim 6 and detecting said nucleic acid bound to genomic DNA, mRNA or cDNA of the non-subtype B HIV-1 virus.

33. A kit for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising a nucleic acid of any one of claims 1 to 5.

34. A kit for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising a nucleic acid of claim 6.

35. A composition comprising an antibody according to claim 23 or 25, and a physiologically acceptable carrier.

36. A nucleic acid probe comprising a sequence of at least 19 contiguous nucleotides derived from the nucleic acid of claim 1, or the complementary sequence thereof.

37. A method of detecting the presence of a non-subtype B HIV-1 virus in a biological sample comprising

- (a) contacting the nucleic acid of the biological sample with a nucleic acid probe of claim 36; and
- (b) detecting the presence or absence of complexes formed between said nucleic acid of the biological sample and said nucleic acid probe.

38. A method of detecting the presence of a non-subtype B HIV-1 virus in a biological sample comprising:

- (a) contacting said biological sample with at least two nucleic acid probes of claim 36;
- (b) amplifying the RNA of the biological sample via reverse transcription-polymerase chain reaction to produce amplification products;
- (c) detecting the presence or absence of amplification products.

24. A method of inducing serum antibodies that bind at least one polypeptide of claim 15, said method comprising administering to a mammal, in a physiologically acceptable carrier, a nucleic acid of any one of claims 1, 2 or 4 which encodes a polypeptide and which produces an immunologically sufficient amount of the encoded polypeptide to elicit said antibodies.

25. An antibody to a non-subtype B HIV-1 virus made by the method of claim 24.

26. A method for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising contacting said sample with an antibody of claim 23 under conditions that allow the formation of an antibody-antigen complex and detecting said complex.

27. A method for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising contacting said sample with an antibody of claim 25 under conditions that allow the formation of an antibody-antigen complex and detecting said complex.

28. A method for detecting the presence of antibodies to a non-subtype B HIV-1 virus in a sample comprising contacting said sample with a polypeptide according to any one of claims 15 or 16 under conditions that allow the formation of an antibody-antigen complex and detecting the complex.

29. A kit for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising an antibody of claim 23.

30. A kit for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising an antibody of claim 25.

31. A method for detecting the presence of a non-subtype B HIV-1 virus in a sample comprising contacting said sample with a nucleic acid of any one of claims 1 to 5 and detecting said nucleic acid bound to the genomic DNA, mRNA or cDNA of the non-subtype B HIV-1 virus.

39. A composition comprising a nucleic acid probe according to claim 36.

40. A method for analyzing a first nucleotide sequence comprising comparing the nucleotide sequence of any one of the nucleotide sequences set forth in Fig. 13 with said first sequence.

41. A method for analyzing a first amino acid sequence comprising comparing the amino acid sequence of any one of the amino acid sequences set forth in Figs. 14-22 with said first sequence.